

AMENDED IN SENATE APRIL 26, 2016

AMENDED IN SENATE MARCH 28, 2016

**SENATE BILL**

**No. 887**

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**Introduced by Senator Pavley**  
**(Coauthors: Senators Allen and De León)**  
(Coauthor: Assembly Member Wilk)

January 20, 2016

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An act to add Chapter 6 (commencing with Section 42710) to Part 4 of Division 26 of the Health and Safety Code, and to amend Section 3236.5 of, and to add Sections 3133, 3134, 3135, 3136, 3137, 3138, 3139, 3140, 3141, 3142, 3143, and 3144 to, the Public Resources Code, relating to natural gas.

LEGISLATIVE COUNSEL'S DIGEST

SB 887, as amended, Pavley. Natural gas storage wells.

Under existing law, the Division of Oil, Gas, and Geothermal Resources in the Department of Conservation regulates the drilling, operation, maintenance, and abandonment of oil and gas wells in the state. Existing law provides that a person who fails to comply with specific laws relating to the regulation of oil or gas operations is guilty of a misdemeanor.

This bill would require the division, before January 1, 2018, and annually thereafter, to inspect all natural gas storage wells serving or located in a natural gas storage facility and would prescribe standards for a natural gas storage well. This bill would require a natural gas storage well in existence on December 31, 2016, to be brought into compliance with the provisions of this bill by an unspecified date and the use of wells older than an unspecified age to be phased out by an unspecified date. This bill would prohibit the division from issuing a

permit for a new natural gas storage well located within an unspecified distance of a sensitive receptor, as defined, and would require the division to order operators to cease the use of, and plug and abandon, an existing natural gas storage well that is within an unspecified distance of a sensitive receptor by an unspecified date. This bill would require, in the event of a loss of the integrity of a natural gas storage well, well casing, or cementing resulting in a significant, uncontrolled leak of natural gas, that preparations for the drilling of a relief well begin within 24 hours of the discovery of the leak. This bill would require the operator, in the event of a leak of any size from a natural gas storage well, to notify the division immediately and would require the division to post information about the leak on its Internet Web site, as prescribed. This bill would require the division to convene an independent panel of recognized experts to develop best practices for natural gas storage facilities and to review and incorporate the best practices developed by the panel into its regulations for natural gas storage wells, ~~as if appropriate, and to the extent those practices are applicable, for other wells under the division's jurisdiction, as applicable.~~ *jurisdiction. The bill would require the division to periodically, and whenever necessary, review advances in relevant technologies and best practices for natural gas storage facilities and, if appropriate, to incorporate changes in best practices into its regulations for natural gas storage wells and, to the extent those practices are applicable, for other wells under the division's jurisdiction.* This bill would require the division, in consultation with the Office of Environmental Health Hazard Assessment, the State Department of Public Health, and the Department of Industrial Relations, to perform a risk assessment of natural gas storage wells and to report the findings of the risk assessment to the Legislature. This bill would require the State Air Resources Board, in consultation with any local air district and the division, to develop guidelines for a monitoring program that includes continuous monitoring of the ambient concentration of natural gas at sufficient locations throughout a natural gas storage facility or planned natural gas storage facility to identify natural gas leaks and the presence of natural gas emissions in the atmosphere. The bill would require an operator of a natural gas storage facility to develop and submit to the board a facility monitoring plan that satisfies the program requirements, and would require the board to review the plan and to either approve or disapprove the plan. This bill would require monitoring data to be provided to the board. This bill would require the division to post and make available

on its Internet ~~Website~~ *Web site* all materials that are provided to the board or division in order to comply with the provisions added by this act. Because a violation of these requirements would be a crime, the bill would impose a state-mandated local program.

Existing law requires the operator of a well to file a written notice of intention to commence drilling with, and prohibits any drilling until approval is given by, the supervisor or district deputy. Under existing law, the notice is deemed approved if the supervisor or district deputy fails to respond to the notice in writing within 10 working days from receipt and is deemed canceled if operations have not commenced within one year of receipt. Existing law provides that these provisions also apply to the deepening or redrilling of the well, any operation involving the plugging of the well, or any operations permanently altering in any manner the casing of the well.

This bill would require certain materials, relating to wells serving or located in a natural gas storage facility, to be submitted by the operator and approved at the supervisor's discretion before approval of the notice. This bill would provide that the public has a right to review the locations of all new natural gas storage wells or existing wells converting to natural gas storage wells before the approval of the notice.

Existing law requires the owner or operator of any well to keep, or cause to be kept, a careful and accurate log, core record, and history of the drilling of the well.

This bill would require the well history to include all operations, injection, production, and emplacement of any materials into a natural gas storage well, and to be disclosed to the division by the operator, as specified.

Under existing law, a person who violates certain statutes or regulations relating to oil and gas well operations is subject to a civil penalty not to exceed \$25,000 for each violation. Existing law provides that the unreasonable waste of natural gas by act, omission, sufferance, or insistence is opposed to the public interest and is unlawful.

This bill would provide that a violation of the prohibition against the unreasonable waste of natural gas is subject to the civil penalty not to exceed \$25,000 for each violation.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: yes.

*The people of the State of California do enact as follows:*

- 1     SECTION 1. The Legislature finds and declares as follows:  
2     (a) Public transparency regarding regulations and regulatory  
3 activity to protect public health and welfare and natural resources  
4 is essential.  
5     (b) Safe operation of gas storage wells and associated piping  
6 and equipment is essential in order to provide for public,  
7 environmental, and occupational health and welfare, and includes  
8 a proactive approach to potential problems.  
9     (c) On October 23, 2015, a significant, uncontrolled leak from  
10 a natural gas storage well that was originally drilled over 60 years  
11 ago was discovered in the Aliso Canyon natural gas storage facility  
12 located in the County of Los Angeles. Initial efforts to stop the  
13 leak failed.  
14     (d) The Division of Oil, Gas, and Geothermal Resources in the  
15 Department of Conservation responded swiftly to the leak,  
16 including by issuing two orders that, among other things, require  
17 the use of relief wells. The division worked around the clock  
18 overseeing efforts to stop the leak.  
19     (e) It was several days before the community was notified of  
20 the leak, although numerous residents started reporting odor  
21 concerns almost immediately. The leaking well is up the hill and  
22 approximately one and one-quarter miles away from the nearest  
23 home. Other natural gas storage wells serving this facility are  
24 located closer to homes.  
25     (f) The Governor declared a state of emergency on January 6,  
26 2016, in order to facilitate the ongoing state response and efforts  
27 to stop the leak.  
28     (g) On February 18, 2016, the Division of Oil, Gas, and  
29 Geothermal Resources in the Department of Conservation certified  
30 that the Aliso Canyon leak had been stopped. Reports estimate  
31 almost 100,000 metric tons of the potent greenhouse gas methane  
32 was emitted to the atmosphere. Community health concerns  
33 continue postleak with over 150 complaints reported to the County  
34 of Los Angeles.

1 (h) The standards for natural gas storage wells need to be  
2 improved in order to reflect 21st century technology, recognize  
3 that these facilities may be in locations near population centers,  
4 and ensure a disaster like the Aliso Canyon leak does not happen  
5 again.

6 SEC. 2. Chapter 6 (commencing with Section 42710) is added  
7 to Part 4 of Division 26 of the Health and Safety Code, to read:

8  
9 CHAPTER 6. NATURAL GAS STORAGE FACILITY MONITORING

10  
11 42710. (a) The state board, in consultation with any local air  
12 district and the Division of Oil, Gas, and Geothermal Resources  
13 in the Department of Conservation, shall develop a natural gas  
14 storage facility monitoring program that includes continuous  
15 monitoring of the ambient concentration of natural gas at sufficient  
16 locations throughout a natural gas storage facility or planned  
17 natural gas storage facility to identify natural gas leaks and the  
18 presence of natural gas emissions in the atmosphere. The  
19 continuous monitoring program may be supplemented by daily  
20 leak detection measurements.

21 (b) The program shall include guidelines for the continuous  
22 monitoring which shall include, at minimum, optical gas imaging  
23 and accurate quantitative monitoring of natural gas concentrations.  
24 The program shall include protocols for both stationary and mobile  
25 monitoring, as well as fixed and temporary monitoring locations.

26 (c) An operator of a natural gas storage facility shall develop  
27 and submit to the state board a facility monitoring plan that satisfies  
28 program requirements pursuant to subdivision (a). The state board  
29 shall review the plan and may approve or disapprove the plan.

30 (d) Monitoring data shall be provided to the state board. All  
31 materials provided to comply with this section shall be posted and  
32 available to the public on the Internet Web site of the Division of  
33 Oil, Gas, and Geothermal Resources.

34 SEC. 3. Section 3133 is added to the Public Resources Code,  
35 to read:

36 3133. (a) As used in this article, “natural gas storage well”  
37 means an active or idle natural gas storage well serving or located  
38 in a natural gas storage facility.

39 (b) Before January 1, 2018, and annually thereafter, the division  
40 shall inspect all natural gas storage wells.

1 (c) A natural gas storage well in existence on December 31,  
2 2016, shall be brought into compliance with this article by \_\_\_\_.  
3 The use of a natural gas storage well older than \_\_\_\_ shall be  
4 phased out by \_\_\_\_.

5 SEC. 4. Section 3134 is added to the Public Resources Code,  
6 to read:

7 3134. A natural gas storage well shall meet all of the following  
8 standards:

9 (a) The well shall have an automatic downhole shutoff system,  
10 including, but not limited to, surface-controlled subsurface safety  
11 valves, deployed in order to limit leaks associated with a loss of  
12 the integrity of a well, well casing, or cementing. The shutoff  
13 system shall be tested and the results of the test shall be reported  
14 to the division no less than annually.

15 (b) Proactive evaluation of the integrity of the well, well casing,  
16 and cementing across the entire length of the well shall be  
17 conducted to thoroughly, quantitatively, and accurately assess their  
18 condition. These assessments shall be performed using the best  
19 available technology. Based upon these assessments, the risks  
20 posed by erosion, corrosion, aging, scaling, cracking, and any other  
21 process that may produce natural gas leaks shall be determined.  
22 A natural gas storage well that has lost integrity or that is at risk  
23 of an imminent loss of integrity shall be immediately repaired  
24 before returning to service. A natural gas storage well at high risk  
25 of a loss of integrity shall be evaluated pursuant to the measures  
26 in this subdivision at least annually.

27 (c) Natural gas injection and production shall be through tubing  
28 only and isolated from contact with the well casing.

29 (d) Annular pressure and production or injection flow rate shall  
30 be continuously monitored.

31 SEC. 5. Section 3135 is added to the Public Resources Code,  
32 to read:

33 3135. (a) For the purposes of this section, “sensitive receptor”  
34 includes, but is not limited to, a school, hospital, and residential  
35 housing.

36 (b) In addition to the requirements of Section 3134, a natural  
37 gas storage well that is within 10,000 feet of a sensitive receptor  
38 shall meet both of the following requirements:

39 (1) Have continuous monitoring of natural gas concentrations  
40 to identify natural gas leaks at the wellhead.

1 (2) Be evaluated pursuant to the measures in subdivision (b) of  
2 Section 3134 at least annually.

3 (c) The division shall not issue a permit for a new natural gas  
4 storage well located within \_\_\_\_ feet of a sensitive receptor, and  
5 the division shall order operators to cease the use of, and plug and  
6 abandon, an existing natural gas storage well within \_\_\_\_\_ feet of  
7 a sensitive receptor by \_\_\_\_.

8 SEC. 6. Section 3136 is added to the Public Resources Code,  
9 to read:

10 3136. (a) The operator of a natural gas storage well shall  
11 submit for the supervisor's approval the following materials:

12 (1) A regular maintenance program for the well and the portion  
13 of the facility within the division's jurisdiction. The maintenance  
14 program shall include training for site personnel and proactive  
15 replacement of equipment at risk of failure to ensure safe operation.

16 (2) Design and operating conditions and parameters for the well  
17 and the portion of the facility within the division's jurisdiction.

18 (3) An inspection, leak detection, and monitoring program for  
19 the well and the portion of the facility within the division's  
20 jurisdiction that includes monitoring of natural gas concentrations  
21 pursuant to Chapter 6 (commencing with Section 42710) of Part  
22 4 of Division 26 of the Health and Safety Code. Ambient natural  
23 gas monitoring sufficient to include monitoring of a new or  
24 reworked well shall be in operation before a new well is drilled or  
25 a well is reworked.

26 (4) A site-specific risk management plan to identify and plan  
27 for mitigation of all hazards and potential hazards associated with  
28 natural gas storage well operation. The risk management plan shall  
29 provide for regular review and revision, as needed, to ensure the  
30 plan appropriately reflects current conditions. The risk management  
31 plan shall include, but is not limited to, all of the following:

32 (A) A natural gas leak prevention and response program that  
33 addresses the full range of natural gas leaks possible at the facility  
34 with specific response plans that provide for immediate control of  
35 the leak. The prevention and response program shall include, but  
36 is not limited to, all of the following:

37 (i) A protocol for public notice of the leak to the community by  
38 the operator.

39 (ii) Prepositioning and identification of materials and personnel  
40 necessary to respond to leaks. This shall include materials,

1 including equipment to capture leaked gas, to respond to the leak  
2 itself as well as to protect public health.

3 (iii) A training program to ensure site personnel are prepared  
4 to respond to a leak.

5 (B) A plan for corrosion monitoring and evaluation.

6 (C) A schedule for regular well and reservoir integrity  
7 assessments.

8 (D) An assessment of the risks associated with the natural gas  
9 storage well and its operation.

10 (E) Planned risk mitigation efforts.

11 (b) All of the materials described in subdivision (a) shall be  
12 approved by the supervisor, at his or her discretion, and in the  
13 possession of the division before the supervisor or district deputy  
14 approves a notice required pursuant to Section 3203.

15 (c) All of the materials described in subdivision (a) shall be  
16 reported to the division annually. The operator shall not deviate  
17 from the programs, plans, and other conditions and protocols  
18 contained in the materials without prior written approval by the  
19 supervisor.

20 SEC. 7. Section 3137 is added to the Public Resources Code,  
21 to read:

22 3137. The public has a right to review the location of a natural  
23 gas storage well or conversion of an existing well to a natural gas  
24 storage well before the approval of any notice required pursuant  
25 to Section 3203.

26 SEC. 8. Section 3138 is added to the Public Resources Code,  
27 to read:

28 3138. In the event of a loss of the integrity of a natural gas  
29 storage well, well casing, or cementing resulting in a significant,  
30 uncontrolled leak of natural gas, preparations for the drilling of a  
31 relief well shall begin within 24 hours of the discovery of the leak  
32 regardless of any other activities undertaken to stop the leak.

33 SEC. 9. Section 3139 is added to the Public Resources Code,  
34 to read:

35 3139. In the event of a leak of any size from a natural gas  
36 storage well, the operator shall notify the division immediately.  
37 Within 24 hours of notification, the division shall post information  
38 about the leak on its Internet Web site and provide regular updates  
39 to the public until the leak is stopped.



SEC. 10. Section 3140 is added to the Public Resources Code, to read:

3140. (a) The division shall convene an independent panel of recognized experts to develop best practices for natural gas storage facilities. The panel shall consider at least all of the following:

(1) The proximity of a natural gas storage facility and wells to populations of people.

(2) The age or condition at which a well should be plugged and abandoned, and what standards the plugging and abandonment should meet.

(3) The range of proactive methods to assess the integrity of a well, well casing, and cementing, and identifying the best available technology for these assessments.

(4) A thorough analysis of the risks associated with the conversion of a well for use as a natural gas storage well.

(5) Natural gas storage well operating, maintenance, and monitoring standards.

(b) Upon completion of the panel's work pursuant to subdivision (a), the division shall review and incorporate best practices developed by the panel into its regulations for natural gas storage wells, ~~as if appropriate, and and, to the extent those practices are applicable, for other wells under the division's jurisdiction, as applicable.~~ jurisdiction.

(c) *The division shall periodically, and whenever necessary, review advances in relevant technologies and best practices for natural gas storage facilities and, if appropriate, shall incorporate changes in best practices into its regulations for natural gas storage wells and, to the extent those practices are applicable, for other wells under the division's jurisdiction.*

SEC. 11. Section 3141 is added to the Public Resources Code, to read:

3141. (a) The division, in consultation with the Office of Environmental Health Hazard Assessment, the State Department of Public Health, and the Department of Industrial Relations, shall perform a risk assessment of natural gas storage wells. The risk assessment shall include, but is not limited to, all of the following information:

(1) The age and construction of a well.

(2) The service history and operating conditions of the well.

1 (3) The potential impact of a leak on public, occupational, and  
2 environmental health, safety, and welfare.

3 (b) The risk assessment shall be subjected to peer review by  
4 independent experts.

5 (c) The findings of the risk assessment shall be reported to the  
6 Legislature in accordance with Section 9795 of the Government  
7 Code.

8 SEC. 12. Section 3142 is added to the Public Resources Code,  
9 to read:

10 3142. To ensure that the division has all the records it needs  
11 to evaluate natural gas storage wells, the well history maintained  
12 pursuant to Section 3213 shall include all operations, injection,  
13 production, and emplacement of any materials into the well. The  
14 operator shall disclose the well history to the division for each  
15 operation, injection, production, and emplacement of any material  
16 into the well.

17 SEC. 13. Section 3143 is added to the Public Resources Code,  
18 to read:

19 3143. All materials provided to the division to comply with  
20 Section 3133 to 3142, inclusive, shall be posted and available to  
21 the public on the Internet Web site of the division.

22 SEC. 14. Section 3144 is added to the Public Resources Code,  
23 to read:

24 3144. A member of the public may bring suit for writ of  
25 mandate against the division for failure to enforce Sections 3133  
26 to 3143, inclusive.

27 SEC. 15. Section 3236.5 of the Public Resources Code is  
28 amended to read:

29 3236.5. (a) A person who violates this chapter or a regulation  
30 implementing this chapter is subject to a civil penalty not to exceed  
31 twenty-five thousand dollars (\$25,000) for each violation. A person  
32 who commits a violation of Article 3 (commencing with Section  
33 3150) or Section 3300 is subject to a civil penalty of not less than  
34 ten thousand dollars (\$10,000) and not to exceed twenty-five  
35 thousand dollars (\$25,000) per day per violation. An act of God  
36 and an act of vandalism beyond the reasonable control of the  
37 operator shall not be considered a violation. The civil penalty shall  
38 be imposed by an order of the supervisor pursuant to Section 3225  
39 upon a determination that a violation has been committed by the  
40 person charged. The imposition of a civil penalty under this section

1 shall be in addition to any other penalty provided by law for the  
2 violation. When establishing the amount of the civil penalty  
3 pursuant to this section, the supervisor shall consider, in addition  
4 to other relevant circumstances, all of the following:

- 5 (1) The extent of harm caused by the violation.
- 6 (2) The persistence of the violation.
- 7 (3) The pervasiveness of the violation.
- 8 (4) The number of prior violations by the same violator.

9 (b) An order of the supervisor imposing a civil penalty shall be  
10 reviewable pursuant to Article 6 (commencing with Section 3350).  
11 When the order of the supervisor has become final and the penalty  
12 has not been paid, the supervisor may apply to the appropriate  
13 superior court for an order directing payment of the civil penalty.  
14 The supervisor may also seek from the court an order directing  
15 that production from the well or use of the production facility that  
16 is the subject of the civil penalty order be discontinued until the  
17 violation has been remedied to the satisfaction of the supervisor  
18 and the civil penalty has been paid.

19 (c) Any amount collected under this section shall be deposited  
20 in the Oil, Gas, and Geothermal Administrative Fund.

21 SEC. 16. No reimbursement is required by this act pursuant to  
22 Section 6 of Article XIII B of the California Constitution because  
23 the only costs that may be incurred by a local agency or school  
24 district will be incurred because this act creates a new crime or  
25 infraction, eliminates a crime or infraction, or changes the penalty  
26 for a crime or infraction, within the meaning of Section 17556 of  
27 the Government Code, or changes the definition of a crime within  
28 the meaning of Section 6 of Article XIII B of the California  
29 Constitution.